

L Number	Hits	Search Text	DB	Time stamp
1	12	kauffman-steven\$.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/05/06 18:13
2	2	kauffman-steven\$.in. AND "system description"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/05/06 18:15
3	2	kauffman-steven\$.in. AND ("system description" SAME "search engine")	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/05/06 18:17
4	73	ontology! AND (XM1! OR XS1!)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/05/06 18:24
5	4	(ontology! AND (XM1! OR XS1!)) AND ((code! OR codes!) NEAR2 generat\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/05/06 18:23
6	20	(ontology! AND (XM1! OR XS1!)) AND "search engine"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/05/06 18:23
7	21	ontology! SAME (XM1! OR XS1!)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/05/06 18:24

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1) Enter a single keyword, phrase, or Boolean expression.
Example: acoustic imaging (means the phrase acoustic imaging plus any stem variations)

2) Limit your search by using search operators and field codes, if desired.

Example: optical <and> (fiber <or> fibre) <in> ti

3) Limit the results by selecting Search Options.

4) Click Search. See [Search Examples](#)

xml and web and database

Start Search

Clear

Note: This function returns plural and suffixed forms of the keyword(s).

Search operators: <and> <or> <not> <in> [More](#)

Field codes: au (author), ti (title), ab (abstract), jn (publication name), de (index term) [More](#)

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TITLE: System and method for creating a semantic web and its applications in browsing, searching, profiling, personalization and advertising

----- KWIC -----

Current search engines rely on syntactic and structural methods. The use of keyword and corresponding search techniques that utilize indices and textual information without associated context or semantic information is an example of such a syntactic method. Use of these syntactic methods in information retrieval using keyword-based search is the most common way of searching today. Unfortunately, most search engines produce up to hundreds of thousands of results, and most of them bear little resemblance to what the user was originally looking for, mainly because the search context is not specified and ambiguities are hard to resolve as discussed in Jimmy Guterman, "The Endless Search, The Industry Standard", Dec. 20, 1999 <http://www.thestandard.com/article/display/0,1151,8340,00.html>. One way of enhancing a search request is using Boolean and other operators like "+/-" (word must/must not appear) or "NEAR" whereby the number of resulting pages can be drastically cut down. However, the results still may bear little resemblance to what user is looking for.

Most search engines and Web directories offer advanced searching techniques to reduce the amount of results (recall) and improve the quality of the results (precision). Some search methods utilize structural information, including the location of a word or text within a document or site, the numbers of times users choose to view a specific results associated with a word, the number of links to a page or a site, and whether the text can be associated with a tag or attributes (such as title, media type, time) that are independent of subject matter or domain. In a few cases when domain specific attributes are supported (as in the genre of music), the search is limited to one domain or one site (i.e. Amazon.com, CDNow.com). It may also be limited to one purpose, such as product price comparison. Also, the same set of attributes is provided for search across all assets (rather than domain specific attributes for a certain collection of assets, context, or domain).

Grouping search results by Web sites, as some search engines like Excite offer, can make it easier to browse through the often vast number of results. NorthernLight takes the idea of organizing the Web one step further by providing a way of organizing search results into so-called "buckets" of related information (such as "Thanksgiving", "Middle East & Turkey", a.s.o). Both approaches do not improve the search quality per se, but they facilitate the navigation through the search results.

To further aid the user in getting to the information users are looking for, some search engines provide "premium content" editorially collected and organized into directories that help put the search in the right context and resolve ambiguities. For example, when searching for "turkey" on Excite.com, the first results include links to premium content information on both turkey the poultry and Turkey the European country. Yahoo is a Web directory that lets the user browse their taxonomy and search only within certain domains to cut down on the number of results and improve precision.

The search engine NorthernLight automatically extracts some content-descriptive and content-independent metadata (subject, type, source, and language) and maintains an extensive hierarchy of domains, but fails to

further identify and extract domain-specific attributes such as "composer" or "cast".

Search result or hits: a listing of results provided by a state-of-the-art search engine, typically consisting of a title, a very short (usually 2-line) description of a document or Web page, and a URL for the Web page or document.

In one embodiment, the WorldModel manifests itself in the form of a collection of XML documents, but could also be implemented as tables in a relational database. The WorldModel is somewhat similar to a data dictionary in that it describes in more precise terms what kind of information is stored in a database. However, the WorldModel not only stores data types, descriptions, and constraints on the items stored in the present invention's metabase, but it also captures the semantics of the data in the metabase. It also has a vital role in the creation of metabase records, the management of the extraction process, and the customization of results for different customers.